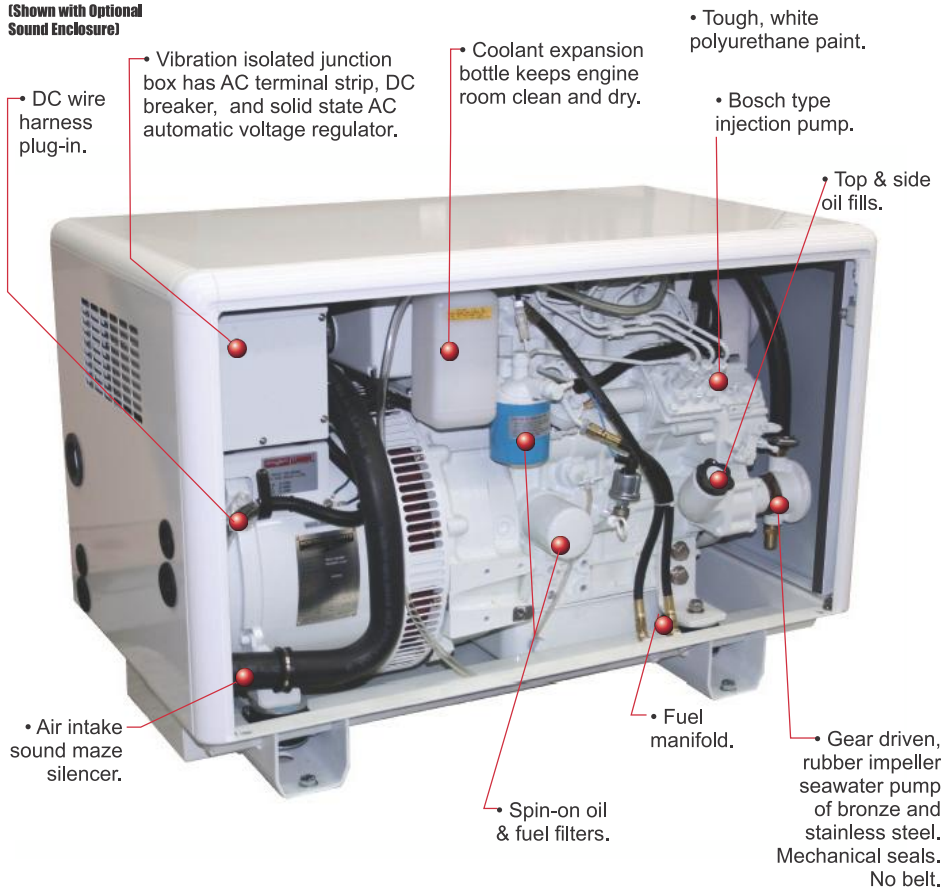


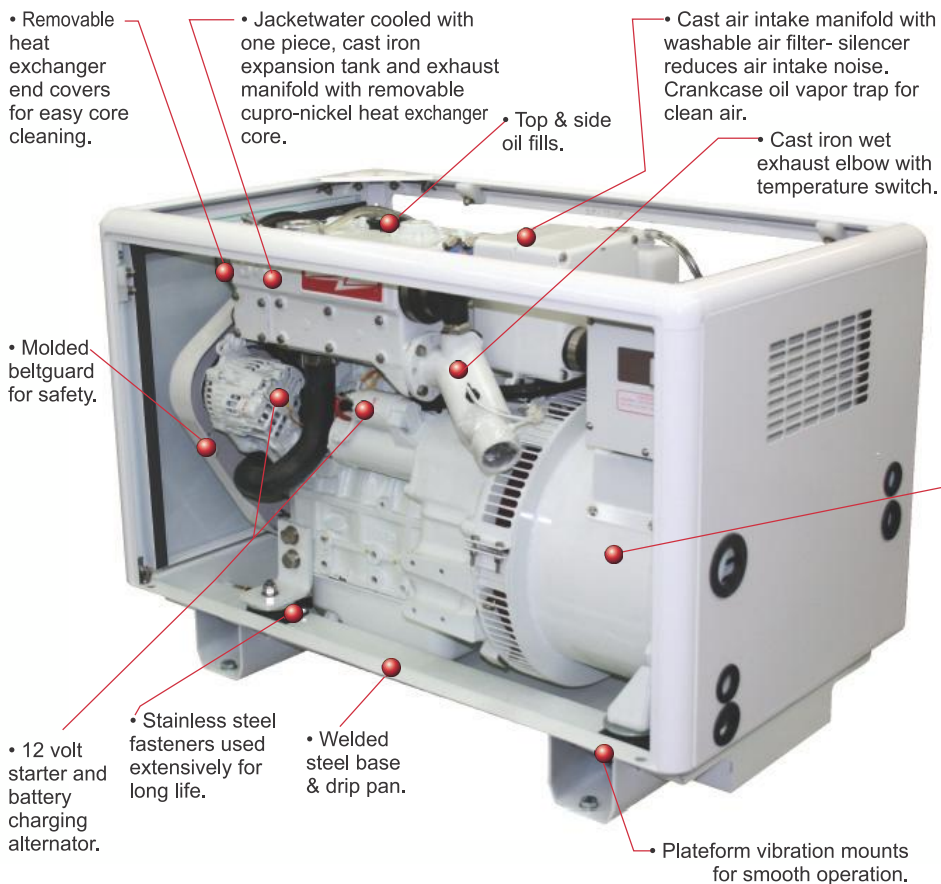
# NORTHERN LIGHTS

# M843NW3

## Service Side (Shown with Optional Sound Enclosure)



## Non-Service Side



**12 kW**  
60 Hz / 1800 RPM

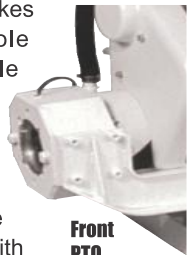
**10 kW**  
50 Hz / 1500 RPM

The M843NW3 is small in size but not in heart. It comes with all the time-tested features you expect on a Northern Lights. A simple, reliable cooling system that minimizes belts, hoses and gaskets. A relay based DC electrical system without expensive printed circuit boards. Single side service accessibility. Crankcase oil vapor trap system and welded drip pan base to keep your engine room as clean as the 843's white polyurethane paint job.

The 843 also plays well with others. Team it up with a larger Northern Lights set. The 843 will shoulder the light load hours and let its big buddy take a rest. Since it only uses 0.62 gph of fuel at half load it will rest your wallet too.

This little workhorse takes multi-tasking to a whole new level. Clean, stable electricity out of one end and accessory driving horsepower out the other. All you need is the optional, front power take off and electric clutch. With a touch of a button you will have hydraulic power. No need to start up that main engine just to run a deck winch.

Clean inside and out, the M843NW3 meets the US EPA Tier III emission requirements. What more could you ask from a guy that is only two feet tall?



## Featuring the W-Series generator

The W-Series generator end is a major step in our constant quest to give you the best generator set on the market. It features an auxiliary stator winding that supplies separate and stable power to the Automatic Voltage Regulator (AVR). The results are impressive:

- Classification society compliance.
  - Real 300% short circuit capability.
  - Improved AC circuit breaker performance.
- See your dealer for more information.

**NORTHERN LIGHTS**

# M843NW3 Specifications and Dimensions

# M843NW3 - 12 kW/10 kW

## AC Output<sup>1</sup>

<b>12 kW</b>	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 120-240 V/50A, 120 V/100A
<b>10 kW</b>	50 Hz, 1500 RPM, 1 Ph, 1.0 PF, 220 V/45.4A

Optional	Three Phase with 0.8 PF
Voltage regulation	±1%

## Lugger L843N3 Engine

Type	Vertical inline 3 cylinder diesel
Displacement	91 in <sup>3</sup> (1.5 ltr)
Bore/Stroke	3.30/3.50 in (84/90 mm)
HP @ RPM	20.1/1800 16.8/1500

## Approx. fuel use

1800 RPM @ full load <sup>2</sup>	1.2 gph (4.5 lph)
1800 RPM @ half load <sup>2</sup>	0.62 gph (2.3 lph)
1500 RPM @ full load <sup>2</sup>	1.0 gph (3.78 lph)
1500 RPM @ half load <sup>2</sup>	0.51 gph (1.93 lph)

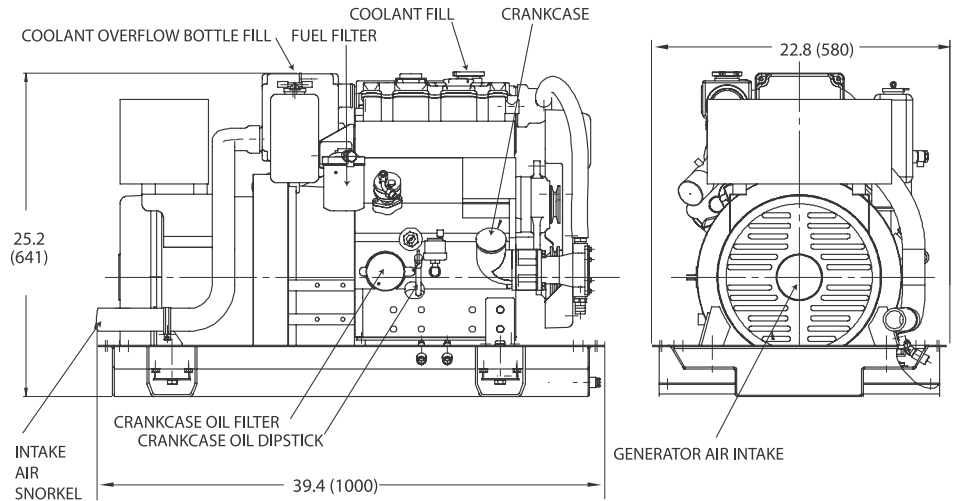
## Installation Data & Weight

Wet exhaust elbow	2 inch (51 mm) OD
Raw water inlet	3/4 inch (19 mm) OD
Fuel inlet and return	1/4 inch NPT
Approximate dry weight	837 lbs (380 kg)

1. Based on SAE J1995 and ISO 3046.

2. Actual fuel consumption will vary depending on operating conditions

## M843NW3 Dimensional Drawing



**M843NW3 Overall Dimensions: L x W x H: 39.4 x 22.8 x 25.2 inch (1000 x 580 x 641 mm)**

**Sound Enclosure Dimensions L x W x H: 39.4 x 22.8 x 25.8 inch (1000 x 580 x 655 mm)**

**Sound Enclosure Weight: 75 lbs. (34 kg)**

Dimensions given in inches (mm). Dimensions subject to change without notice. Contact dealer or visit [www.northern-lights.com](http://www.northern-lights.com) for most current installation drawings.

## M843NW3 Features and Benefits

### Engine Block

- Four cycle, 3 cylinder, liquid cooled, naturally aspirated, overhead valve diesel.
- Swirl combustion chambers improve fuel efficiency and reduce smoke.
- Glow plugs for quick cold starting.

### Cooling System

- Freshwater cooling system in heat exchanger or keel cooled configuration.
- One-piece heat exchanger, expansion tank and liquid cooled exhaust manifold. Fewer troublesome hoses and gaskets. Cast iron to resist corrosion and electrolysis.
- Heat exchanger cooling is standard. Tube-type heat exchanger has removable ends for easy cleaning. Easily accessible, rubber impeller seawater pump of bronze and stainless steel is gear driven; no drive belt.

### Fuel System

- Fuel system is self-venting.
- Injection pump with 5% mechanical governor for close AC frequency control.
- Pintle injectors with replaceable tips.
- Mechanical lift pump with hand primer. No electric pump to fail.
- Large spin-on fuel filter.
- Flexible fuel lines routed to fuel manifold.
- Stop solenoid controls the fuel rack, not throttle, to eliminate speed variance and linkage problems.

### Intake and Exhaust

- Meets US EPA Tier III emission requirements.
- Washable air cleaner in cast intake manifold reduces intake noise.
- Cast iron, wet exhaust elbow for safety.

### Lubrication System

- Full flow, spin-on oil filter with bypass.
- 5.8 qt. (5.5 ltr) oil capacity for better lubrication. 200 hr oil change intervals.
- Oil drain for quick, clean oil changes.



### DC Electrical System

- DC system uses reliable relays instead of unrepairable printed circuit board.
- 12 volt starter motor and battery charging alternator with regulator and belt guard.
- Standard panel: Remote mount S-1B has hour meter, stop-start switch with run light and preheat switch.
- Expandable to six panels up to 110 ft from the set.
- 20 foot (6 m) plug-in panel harness lets you mount your panel anywhere onboard. Better than a inaccessible unit mount panel that is prone to vibration problems.
- Low oil pressure, high coolant temperature and high exhaust temperature safety shutdowns standard.



### AC Generator

- Northern Lights, direct coupled, brushless AC generator is maintenance free. 4 lead-1 phase 50 or 60 Hz output standard. 12 lead-3 phase optional. Conservative heat rise rating: 95°C/50°C ambient.
- Automatic Voltage Regulator is powered by dedicated AC winding for true 300% short circuit capability. Quick ±1% RMS no load to full load voltage regulation. AVR has circuit breaker protection.
- Generator features: high quality Class "H" epoxy insulation, accessible diodes, over-sized bearing and junction box for wiring

### Special Equipment

- Welded steel base frame with drip pan.
- Four platform mounts isolate vibration.
- White, long-life polyurethane paint.
- Operator's and parts manuals standard.

### Classification Standards

- Contact factory for details.



## New enclosure package is 14% smaller than previous design

Northern Lights' revolutionary new sound enclosure shares a base frame with the generator set, creating a compact power and sound attenuation package and boasts 14% less overall cubic volume than the previous enclosed units.



- Vibration isolation mounts for smooth, quiet performance
- Stainless steel paddle latch on service side.
- Interior panel retention system allows generator access at nonservice panels without using tools.
- Electrogalvanized steel composition allows for single layer of foam insulation, with superior noise attenuation.
- Protective film coating ensures safety and longevity.
- External fuel connections for easy installation.
- Front exhaust exit option.
- Tough, white, powder-coat finish.



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